

WHAT IS CLAIMED IS:

1. A composition comprising (a) a non-naturally occurring polypeptide having an amino acid sequence according to the formula X1 H X2 D G S F S D E M N T X3 L D X4 L A X5 X6 D F I N W L X7 X8 T K I T D X9 (SEQ ID NO: 1) and (b) a pharmaceutically acceptable combination of (i) an isotonic agent, (ii) a buffer, and (iii) a preservative, a surfactant, or a combination of a surfactant and a preservative,

wherein (I) X1 is NH₂, DFPEEVAIVEELGRR (SEQ ID NO:2), DFPEEVTIVEELGRR (SEQ ID NO:3), DFPEEVNIVEELRRR (SEQ ID NO:4), or a fragment of any of SEQ ID NOS:2-4; X2 is Ala or Gly; X3 is Ile or Val; X4 is Asn, Ser, or His; X5 is Ala or Thr; X6 is Arg or Lys; X7 is Ile or Leu; X8 is Gln or His; and X9 is OH, Lys, Arg, Arg-Lys, Lys-Arg, Arg-Arg, or Lys-Lys and (II) the solubility of the peptide, stability of the peptide, or both is significantly greater than the solubility and/or stability of the peptide without the combination.

2. The composition of claim 1, wherein the composition comprises a preservative.

3. The composition of claim 2, wherein X2 is Gly.

4. A method of promoting the treatment of small bowel syndrome, Crohn's disease, ileitis, intestinal inflammation, gastric ulceration, duodenal ulceration, inflammatory bowel disease, or intestinal cancer damage therapy in a patient comprising administering an effective amount of the composition of claim 2 to the patient.

5. A method of promoting the treatment of small bowel syndrome, Crohn's disease, ileitis, intestinal inflammation, gastric ulceration, duodenal ulceration, inflammatory bowel disease, or intestinal cancer damage therapy in a patient comprising administering an effective amount of the composition of claim 3 to the patient.

6. A non-naturally occurring peptide having an amino acid sequence according to the formula X1 H X2 D G S F S D E M N T X3 L D X4 L A X5 X6 D F I N W L X7 X8 T K I T D X9 (SEQ ID NO: 1),

wherein X1 is NH₂, DFPEEVAIVEELGRR (SEQ ID NO:2), DFPEEVTIVEELGRR (SEQ ID NO:3), DFPEEVNIVEELRRR (SEQ ID NO:4), or a fragment of any of SEQ ID NOS:2-4; X2 is Ala or Gly; X3 is Ile or Val; X4 is Asn, Ser, or His; X5 is Ala or Thr; X6 is Arg or Lys; X7 is Ile or Leu; X8 is Gln or His; and X9 is OH, Lys, Arg, Arg-Lys, Lys-Arg, Arg-Arg, or Lys-Lys.

7. The non-naturally occurring peptide of claim 6, wherein X2 is Gly.

8. A lyophilized composition comprising the non-naturally occurring peptide of claim 6.

9. A lyophilized composition comprising the non-naturally occurring peptide of claim 7.

10. A method of promoting the treatment of small bowel syndrome, Crohn's disease, ileitis, intestinal inflammation, gastric ulceration, duodenal ulceration, inflammatory bowel disease, or intestinal cancer damage therapy in a patient comprising administering an effective amount of the peptide of claim 6 to the patient.

11. A method of promoting the treatment of small bowel syndrome, Crohn's disease, ileitis, intestinal inflammation, gastric ulceration, duodenal ulceration, inflammatory bowel disease, or intestinal cancer damage therapy in a patient comprising administering an effective amount of the peptide of claim 7 to the patient.